Roadmap to IPM Run Files for EPA Modeling Applications (v. 2.1)

The files posted in the *Runs Table for EPA Modeling Applications (v. 2.1) Using IPM* contain detailed inputs and outputs for the listed runs. EPA recommends having on hand its *Documentation Report* (www.epa.gov/airmarkets/epa-ipm/index.html#documentation) when reviewing these files.

Clicking on the run identification number which appears in the second column of the Runs Table, users can download a zipped archive file, which contains the following IPM run files:

• **DAT file:** Once decompressed, these files will have a "DAT" filename extension, e.g., ipm2000s100d.dat. They contain the key input set-up data used to define the model run, including the definitions and specifications for run years, model regions, model plants, financial parameters, available fuels, and power system transmission and operating parameters.

• **System Summary Report:** These files will have a "doc" filename extension, e.g., EPA ipm2000s100d.doc. They contain system-wide results for all run years. Topics reported include projections of generation, capacity, capacity additions and changes, capacity factors, production costs, emissions, and allowance prices. Disaggregation by model plant type categories are provided for the first five of these topics. The model plant types are differentiated by fuel used (e.g., coal, oil/gas, nuclear, hydro), combustion technology (e.g., turbine, combined cycle gas), control technology (e.g., scrubber, post-combustion NO_X control), and retrofit structure (e.g., coal plant with existing SNCR retrofit with ACI). A key to all the plant types used in reporting these results can by found in Chapter 9 (www.epa.gov/airmarkets/epa-ipm/index.html/chapter9.pdf) of the documentation report.

• **RPE file:** Once decompressed, these files will have an "RPE" filename extension, e.g., ipm2000s100d.rpe. For each model plant, this file shows the projections of fuel consumption, emissions (rates and tonnage), capacity, costs (capital, fixed operations and maintenance, and variable operations and maintenance), and generation. The model plant results are grouped by model plant type within model regions within model run year. Aggregated results are reported (a) for each model region differentiated by plant type, (b) for each plant type differentiated by model region, (c) for model regions without consideration of plant type, and (d) for plant types without consideration of model region.

• **CAR file:** Once decompressed, these files will have an "CAR" filename extension, e.g., ipm2000s100d.car. This file contains capacity utilization projections for each model plant grouped by model plant type. Included are capacity contributed to reserve margins, capacity dispatch, and summer, winter, and annual generation, capacity factors, and availabilities. The capacity dispatch column in this file indicates the total capacity (in megawatts) that the model plant represents. The average size of a unit that the model plant represents is found in the DAT file and is the size used for cost assignment (e..g., to determine the applicable economies of scale when retrofitting existing units with emission controls).

• **TAC file:** Once decompressed, these files will have an "TAC" filename extension, e.g., ipm2000s100d.tac. The file contains annual production costs for each model plant grouped by model plant type. For each model plant, total and rate-based capital, fixed operations and maintenance (FOM), variable operation and maintenance (VOM), and fuel costs are shown. The variable costs reported for model plants in this file can provide insights into why the utilization rates reported for some plants in the CAR file are higher than those of other model plants in the same region.

The System Summary Report can be reviewed using word processing software (e.g Microsoft Word or Corel WordPerfect). The other files can be reviewed using a good text viewer or editor. EPA uses Lister, a file viewer built into Windows Commander (http://www.ghisler.com/), a shareware file manager for Windows.